matter has been added. Reconsideration is respectfully requested. Applicants submit that the pending claims 1-36 are patentable over the art of record and allowance is respectfully requested of claims 1-36.

A.   Premature Final Rejection

Applicants' respectfully assert that the Final Office Action is a premature final rejection under MPEP 706.07(c). In particular, a final rejection is proper if the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims nor based on information submitted in an information disclosure statement filed during the period set forth in 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) (MPEP 706.07(a)). In the prior amendment the independent claims were not amended, and, therefore, did not necessitate a new ground of rejection. Therefore, if the Examiner wishes to continue the rejection of the claims, Applicants' respectfully request withdrawal of the finality of this rejection.

B.   Rejections under 35 U.S.C. §102(e) and 35 U.S.C. §103

In paragraph 4, the Office Action rejects claims 1-6, 12-18, 24-30, and 36 under 35 U.S.C. §102(e) as being anticipated by Torii (U.S. Patent No. 6,389,446). Applicants traverse these rejections for the following reasons.

Claim 1 recites: generating a signal when status for the job is changed from a first status to a second status, wherein the job may be processed by one or more work processes; notifying a work process associated with the second status that one job had its status changed to the second status in response to the signal; processing, with the work process, the job that had its status changed from the first status to the second status; and, modifying, with the work process, the status of the job after completing the processing of the job.

The Torii recites: "A program is divided into several instruction streams, and each of them is executed as a thread. A thread processor executed the thread. . . The thread status table manages execution status of each thread processor and parent-child relation." (Abstract)

The Office Action cites the Torii patent, Figures 4 and 5, lines 14-50) as disclosing "the status of the threads change and a signal is generated in order to change status." Applicants will treat lines 14-50 to reference Col. 6 as there are several other citations of this section in the Office Action. Figure 4 illustrates a thread status table. The thread status table "has entries for the number of thread processors 6" and each "entry for thread processors #0 through #3 (6a through 6d) includes thread status entry 10." (Col. 6, lines 16-19) At Col. 6, lines 20-22, the Torii patent recites: "Thread status entry 10 indicates the operation status (e.g., 'busy'/'free' state) of corresponding thread processor." Because the thread status table has entries for the *status of thread processors* rather than for jobs, the Torii patent does not anticipate Applicants' claimed element of "generating a signal when status for the job is changed." That is, a thread processor is not equivalent to a job. For example, a job as claimed by Applicants may be "processed by one or more work processes," while the thread processor is not processed by one or more work processes.

The Office Action cites the Torii patent, Figures 4-5, Col. 6, lines 14-50 as disclosing "notifying a work process associated with the second status that one job had its status changed to the second status in response to the signal." Again, at Col. 6, lines 20-22, the Torii patent recites: "Thread status entry 10 indicates the operation status (e.g., 'busy'/'free' state) of corresponding thread processor." Also, at Col. 6, lines 37-42, the Torii patent recites: "it is determined whether a thread processor in a free state exists . . . by checking the content of thread status entry 10 in thread status table 9." This does not anticipate Applicants' claimed element of: "notifying a work process associated with the second status that one job had its status changed to the second status in response to the signal." In particular, the Torii patent discloses that the thread status table is used to determine whether a thread processor is in a busy or free state. The Torii patent does not teach or suggest notifying a work process associated with the second status that one job had its status changed to the second status. The Torii patent does not even associate any work process with a job status.

The Office Action cites the Torii patent, Figures 4-5, Col. 6, lines 14-50, as disclosing "processing, with the work process, the job that had its status changed from the first status to the

second status." The Torii patent does not teach or suggest that a job whose status has changed is processed with a work process. In stead, the Torii patent merely discloses that a thread processor may spawn a thread.

The Office Action cites the Torii patent, Figures 4-5, Col. 6, lines 14-50, as disclosing "modifying, with the work process, the status of the job after completing the processing of the job." Since the thread status table of the Torii patent provides the status of a thread processor, rather than the status of a job that is processed by one or more work processes, the Torii patent can not teach or suggest modifying the status of the job.

Therefore, claim 1 is not anticipated by the Torii patent.

Independent claims 13 and 25 are not anticipated by the Torii patent for at least the same reasons as were discussed with respect to claim 1.

Dependent claims 2-6, 12, 14-18, 24, 26-30, and 36 incorporate the language of independent claims 1, 13, and 25 and add additional novel elements. Therefore, dependent claims 2-6, 12, 14-18, 24, 26-30, and 36 are not anticipated by the Torii patent.

The Office Action rejects claims 2, 14, and 26 citing the Torii patent, Figures 4-5, Col. 6 lines 13-42. The Torii patent does not teach or suggest "processing with the routing process a mapping associating each status with one work process in response to receiving the signal" and "determining from the mapping one work process associated with the second status, wherein the determined work process is notified of the job." In particular, the Torii patent does not mention mapping a work process with a status of a job. Instead the Torii patent discloses a thread status table that lists a busy state or a free state each thread processor.

The Office Action rejects claims 3, 15, and 27 citing the Torii patent, Col. 6, lines 64-67 through Col. 7, lines 1-18 and Col. 9, lines 47-67 through Col. 10 lines 1-2, and Figures 8, 9, and 11. The Torii patent does not teach or suggest " a database table including information on the job, further comprising maintaining, with the work process, a connection with the database that enables communication with the database table, wherein modifying the status of the job after completing processing comprises updating the status of the job to an output status associated with another work process, and wherein updating the status with the output status generates the

signal indicating a change in status." In fact, the Torii patent only recites that the thread status table "has entries for the number of thread processors 6" and each "entry for thread processors #0 through #3 (6a through 6d) includes thread status entry 10, parent thread processor number entry 11, and child thread processor number entry 12." (Col. 6, lines 16-20) This information is not equivalent to the information in Applicants' database table. Furthermore the Torii patent does not describe another work process being associated with an output status.

The Office Action rejects claims 4, 16, and 28 citing the Torii patent, Col. 6, lines 64-67 through Col. 7, lines 1-18 and Col. 9, lines 47-67 through Col. 10 lines 1-2, and Figures 5 and 11. The Torii patent does not teach or suggest that "the signal is generated by an event trigger in the database that responds to an update to the status of the job in the database table." Instead, the Torii patent does not mention event triggers.

The Office Action rejects claims 5, 17, and 29 citing the Torii patent, Col. 6, lines 64-67 through Col. 7, lines 1-18. The Torii patent does not teach or suggest "that there are multiple work processes each associated with one input status and at least one output status, wherein each work process is enabled to update the job status with one associated output status after completing the processing of the job, wherein the output status for one work process is the input status associated with one other work process, and wherein the definition of input and output statuses for work processes, defines the workflow of the job." For example, the Torii patent does not disclose that "the output status for one work process is the input status associated with one other work process." Instead, the Torii patent discloses that there are multiple thread processors and each one is in a free or busy state.

The Office Action rejects claims 6, 18, and 30 citing the Torii patent, Col. 6, lines 43-50. The Torii patent does not teach or suggest "determining whether the work process completed processing the job successfully" and "updating the status of the job to an error status if the work process did not complete processing the job successfully, wherein the status of the job is updated with one output status associated with the work process if the job work process completed processing the job successfully." The Torii patent discloses that "*if it is determined that a thread has been already generated, a thread generation is not needed, and an error signal is returned.*"

This does not anticipate Applicants' claimed updating the status of the job to an <u>error status after determining whether the work process completed processing the job successfully</u>.

The Office Action rejects claims 12, 24, and 36, citing the Torii patent, Col. 9, lines 47-57, through Col. 10, lines 1-13). The Torii patent does not teach or suggest "adding a status update to a list providing status updates for each job" and "using the list to determine how the job has been processed by the work processes. " The cited portion of the Torii patent does not disclose a list providing status updates for each job. Instead, the Torii patent only discloses a thread status table, which is not equivalent to Applicants' claimed list. For example, the thread status table does not provide status updates for each job, but only provides a status of a thread processor.

In paragraph 6, the Office Action rejects claims 7, 10-11, 19, 22-23, 31 and 34-35 under 35 U.S.C. §103(a) as being unpatentable over Torii in view of Flores et al.(U.S. Patent No. 6,058,413). Applicants traverse these rejections for the following reasons.

There is no motivation to combine the Torii and Flores patents as the Torii patent already describes error processing that teaches away from the error processing of the Flores patent. However, even if combined, the Torii and Flores patents do not teach or suggest the subject matter of claims 7, 10-11, 19, 22-23, 31 and 34-35.

Additionally, the Flores patent does not correct the defects of the Torii patent. For example, the Flores patent does not describe generating a signal when status for the job is changed from a first status to a second status, wherein the job may be processed by one or more work processes; notifying a work process associated with the second status that one job had its status changed to the second status in response to the signal; processing, with the work process, the job that had its status changed from the first status to the second status; and, modifying, with the work process, the status of the job after completing the processing of the job.

The Office Action rejects claims 7, 10-11, 19, 22-23, 31, and 34-35 citing the Torii patent, Col. 6, lines 43-50, and the Flores patent Col. 12, lines 1-9, and Col. 24 lines 35-40. Col. 12, lines 8-9 recite: "If there was an error, it is returned to the WEA." Col. 24, lines 35-40 recite: "By default, the STF Processor assumes RTNSTATUS as YES). ERROR keyword is set to 0 if

there was no error processing the Transaction. Otherwise, ERROR will be set to a value and ht error message corresponding to the ERROR will be sent in ERRORMSG."

Claims 7, 19, and 31 disclose that an error work process is associated with the error status, wherein updating the job to the error status causes the notification of the error work process" and "performing error recovery operations on the job; determining whether the error recovery operations corrected the job; and setting the jobs status of the corrected job to a first possible status in the workflow. For example, the Flores patent does not describe an error work process being associated with an error status. Additionally, the Flores patent's setting of the ERROR keyword and sending of an error message teaches away from Applicants' claimed element of "determining whether the error recovery operations corrected the job." Also, the Flores patent does not teach or suggest setting the jobs status.

The Office Action rejected claims 10, 22, and 34, citing the Torii patent and the Flores patent, Col. 7, lines 27-31, Col. 8, lines 14-30, and Figure 4. The Flores patent

Claims 10, 22, and 34 disclose that the job comprises a data file, wherein at least one work process processes the data file to alter its format and at least one other work process processes the data file in the altered format to transmit the work process to an output device. Col. 7, lines 29-31 of the Flores patent recite: "These STF processors map and translate between a workflow-enabled application's data format and the data elements of the workflow system API's." Col. 8, lines 14-30 discloses Figure 4 and "shows the major components of an STF processor. The Flores patent does not teach or suggest that a job comprises a data file. Instead, the Flores patent discloses mapping and translating between a data format and data elements.

Claims 11, 23, and 35 depend from claims 10, 22, and 34 and for at least the same reasons as discussed with respect to claims 10, 22, and 34, claims 11, 23, and 35 are not taught or suggested by the Torii patent or the Flores patent, either alone or together.

Therefore, claims 7, 10-11, 19, 22-23, 31 and 34-35 are not taught or suggested by the Torii patent or the Flores patent, either alone or together.

In paragraph 7, the Office Action rejects claims 8-9, 20-21, and 32-33 under 35 U.S.C. §103(a) as being unpatentable over Torii. Applicants traverse these rejections for the following reasons.

The Office Action cites Col. 6, lines 14-30, and Col. 9, lines 47-67 through Col. 10 lines 1-13, as disclosing the subject matter of claims 8, 20, and 32. Claims 8, 20, and 32 disclose querying the database table for jobs having the status associated with the work process; processing the job having the status associated with the work process; terminating processing of the database table if there are no further jobs in the database table having the status associated with the work process; and querying the database table for jobs after receiving the notification.

Since the Torii patent describes a thread status table that does not describe jobs, the Torii patent can not teach or suggest querying the database table for jobs having the status associated with the work process. Likewise, the Torii patent cannot teach or suggest processing the job having the status associated with the work process; terminating processing of the database table if there are no further jobs in the database table having the status associated with the work process; and querying the database table for jobs after receiving the notification.

Claims 9, 21, and 33 depend from claims 8, 20, and 32 and for at least the same reasons as discussed with respect to claims 8, 20, and 22, claims 9, 21, and 33 are not taught or suggested by the Torii patent.

Therefore, claims 8-9, 20-21, and 32-33 are not taught or suggested by the Torii patent or the Flores patent, either alone or together.
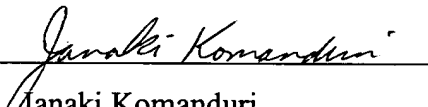
CONCLUSION

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached pages are captioned "Version with Markings to Show Changes Made."

For all the above reasons, Applicant submits that the pending claims 1-36 are patentable over the art of record, and allowance is requested of claims 1-36.

Applicants have not added any claims. Nonetheless, should any additional fees be required, please charge Deposit Account No. 50-0563.

The attorney of record invites the Examiner to contact her at (310) 556-7983 if the Examiner believes such contact would advance the prosecution of the case.

Dated: <u>October 17, 2002</u>   By:_____

Janaki Komanduri
Reg. No.: 40,684

<u>Please direct all correspondences to</u>:

David Victor
Konrad Raynes Victor & Mann, LLP
315 South Beverly Drive, Ste. 210
Beverly Hills, CA 90212
Tel: 310-553-7977
Fax: 310-556-7984

VERSION WITH MARKINGS TO SHOW CHANGES MADE

<u>In the Specification</u>:

In the specification, the following insertions are boldface type and underlined, and deletions are boldface type and enclosed in brackets.

The paragraph starting on page 8, line 19 is amended as follows.

[FIG. 3] FIG. 4 illustrates logic implemented in a worker process to participate in the workflow management system. Control begins at block 150 with the worker 8a, b, c, d waiting for a call from the UDF 12. At this state, the worker is sleeping and not processing the job status table 12. In response to receiving a signal from the UDF 12, the worker 8a, b, c, d queries (at block 154) the job status table 12 for a job having the input status for the worker. The worker 8a, b, c, d would ignore a call from the UDF 12 received when the worker 8a, b, c, d is actively querying and processing the job status table 12. The worker 8a, b, c, d then determines (at block 156) whether there are any unlocked jobs in the job status table 12 having the input status. If not, then the worker 8a, b, c, d returns to block 150 where it enters sleep mode waiting for the next signal from the UDF 12.

<u>In the Claims</u>:

In the following claims, insertions are underlined, and deletions are enclosed in brackets. This response cancels claims 1, 13, 25, and 34.

1.   (Amended) A method for processing a job, comprising;

generating a signal when status for the job is changed from a first status to a second status, wherein the job may be processed by one or more work processes;

notifying a work process associated with the second status that one job had its status changed to the second status in response to the signal;

processing, with the work process, the job that had its status changed from the first status to the second status; and

modifying, with the work process, the status of the job after completing the processing of the job.

13.   (Amended) A system for processing a job, comprising;

means for generating a signal when status for the job is changed from a first status to a second status, wherein the job may be processed by one or more work processes;

means for notifying a work process associated with the second status that one job had its status changed to the second status in response to the signal;

means for processing, with the work process, the job that had its status changed from the first status to the second status; and

means for modifying, with the work process, the status of the job after completing the processing of the job.

25.   (Amended) An article of manufacture for processing a job, the article of manufacture comprising computer usable media including at least one computer program and at. least one work process embedded therein that causes at least one computer to perform:

generating a signal when status for the job is changed from a first status to a second status, wherein the job may be processed by one or more work processes;

notifying a work process associated with the second status that one job had its status changed to the second status in response to the signal;

processing, with the work process, the job that had its status changed from the first status to the second status; and

modifying, with the work process, the status of the job after completing the processing of the job.

34.　　(Amended) The article of manufacture of claim [24] 25, wherein the job comprises a data file, wherein at least one work process processes the data file to alter its format and at least one other work process processes the data file in the altered format to transmit the work process to an output device.